

AMENDMENTS TO THE SPECIFICATION:

Page 7, before the 4th paragraph on the page, insert the following new section:

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 shows the histology of in vitro-produced three-dimensional intervertebral disk cartilage tissues in the cross-section of a microscopic image. Vital differentiated cells with extracellular matrix is surrounded by a peripheral proliferation zone P.

Fig. 2 shows the proliferation and high proliferation capacity of intervertebral disk cells in mixed culture (anulus fibrosus and nucleus pulposus) in the monolayer passage 2 (P2). The number of cells per surface area over time is indicated in the graph.

Fig. 3 shows the expression of disk-specific matrix proteins and marker proteins by intervertebral disk cartilage mixed cells following growth in monolayer culture and subsequent culturing under three-dimensional cell culturing conditions. Expression of components of native intervertebral disk cartilage in vivo representing the most important structural proteins crucial for intervertebral disk cartilage function are shown, including matrix and regulatory proteins (aggrecan, hyaline-specific proteoglycans, and type I, II and III collagens).

Fig. 4 shows the fusing of five three-dimensional intervertebral disk cartilage tissues during continued culture to achieve larger transplants. The tissue spheres adhere to each other and coalesce as shown, to undergo complete fusion after prolonged culture.

Fig. 5 shows the expression of various matrix and regulative proteins by disc derived chondrocytes cultured in monolayer for different passages of cell culture (P2, P6) and after freezing and thawing, showing that formation of matrix and regulative proteins can be retained.